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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
10/597,845	10/16/2008	Eriko Matsui	113184-117	7014	
29175	7590	08/23/2010	EXAMINER		
K&L Gates LLP		HO, TU TU V			
P. O. BOX 1135		ART UNIT		PAPER NUMBER	
CHICAGO, IL 60690		2818			
NOTIFICATION DATE		DELIVERY MODE			
08/23/2010		ELECTRONIC			

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

[chicago.patents@klgates.com](mailto:chicago.patents@klgates.com)

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/597,845	MATSUI ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Tu-Tu V. Ho	2818	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 09 August 2006.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 8-14 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 8-10 is/are rejected.  
 7) Claim(s) 11-14 is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 09 August 2006 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____ .
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>See Continuation Sheet</u> .	5) <input type="checkbox"/> Notice of Informal Patent Application
	6) <input type="checkbox"/> Other: _____

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :08/09/2006,08/24/2006,10/02/2006,05/05/2010.

## **DETAILED ACTION**

### ***Priority***

1. A claim for Foreign Priority is acknowledged. However, to meet requirements under 35 U.S.C. 119(a)-(d), **certified copy of the priority document must be submitted.**

### ***Double Patenting***

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. **Claims 8-10** are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-3 of U.S. Patent No. 7,518,783. Although the conflicting claims are not identical, they are not patentably distinct from each other because said claims of the present invention is a similar version of said claims of the above-identified U.S. Patent(s) with similar intended scope. Specifically, because the respective sets of conflicting claims each is directed to a functional molecular element comprising a system in which an anisotropy of a dielectric constant is changed by a molecular structure change induced by an electric field (“an organic molecule having an anisotropy of a dielectric constant and including

side chains each of which structure is changed under an application of electric field, and a metallic ion”), wherein the functional molecular element includes a complex of an organic molecule having anisotropy of dielectric constant or dipole moment and including side chains each of which structure is changed under application of electric field, and metallic ion (“an organic molecule having an anisotropy of a dielectric constant and including side chains each of which structure is changed under an application of electric field, and a metallic ion”), and wherein the side chain has a linear chain shape, and is substantially bonded to the disc-shaped organic molecule (“an organic molecule having an anisotropy of a dielectric constant and including side chains each of which structure is changed under an application of electric field, and a metallic ion”), it may be said that the conflicting claims are not patentably distinct from each other.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in

- (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or
- (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**4. Claim 8** is rejected under 35 U.S.C. 102(b) as being anticipated by Matsui et al.

JP02004221553A (the ‘553 reference, Publication Date: August 05, 2004).

Referring to **claim 8**, the ‘553 reference discloses in Figs. 1’s and a translated Abstract (by JPO&NCIPI) a functional molecular element comprising a system in which an anisotropy of a dielectric constant is changed by a molecular structure change induced by an electric field.

Specifically, referring to **claim 8**, the reference discloses a functional molecular element comprising a system (molecular complex 1, Fig. 1a) in which an anisotropy of a dielectric constant is changed by a molecular structure change induced by an electric field (Figs. 1b and 1c,

Abstract), wherein “an anisotropy of a dielectric constant is changed” has been interpreted in light of the Specification of the subject application, Pages 11 and 12).

5. **Claim 8** is rejected under 35 U.S.C. 102(b) as being anticipated by Zhang et al. U.S. Patent Application Publication 20030012484 (the ‘484 reference, cited by Applicant).

The ‘484 reference discloses in Fig. 4 and related text a functional molecular element comprising a system in which an anisotropy of a dielectric constant is changed by a molecular structure change induced by an electric field.

Specifically, referring to **claim 8**, the reference discloses a functional molecular element comprising a system (molecular complex 430, Fig. 4, left portion, paragraph(s) [0059]) in which an anisotropy of a dielectric constant is changed by a molecular structure change (right side portion, Fig. 4) induced by an electric field, wherin “an anisotropy of a dielectric constant” and “an anisotropy of a dielectric constant is changed” has been interpreted in light of the Specification of the subject application, Pages 11 and 12).

6. **Claim 8** is rejected under 35 U.S.C. 102(b) as being anticipated by Takabayashi U.S. Patent 4,964,700 (the ‘700).

The ‘700 reference discloses in Fig. 4 and related text a functional molecular element comprising a system in which an anisotropy of a dielectric constant is changed by a molecular structure change induced by an electric field.

Specifically, referring to **claim 8**, the reference discloses a functional molecular element comprising a system (molecular complex 43, Fig. 4, col. 4, lines 35-55) in which an anisotropy of a dielectric constant is changed by a molecular structure change induced by an electric field, wherein “an anisotropy of a dielectric constant” and “an anisotropy of a dielectric constant is changed” has been interpreted in light of the Specification of the subject application, Pages 11 and 12).

#### *Allowable Subject Matter*

7. Claims 11-14 (or claims 9-14, insofar as in compliance with the nonstatutory obviousness-type double patenting rejection detailed above), are objected to as being dependent

upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for the indication of allowable subject matter: The cited art, whether taken singularly or in combination, especially when all limitations are considered within the claimed specific combination, fails to teach or render obvious a functional molecular element with all exclusive limitations as recited in claims 9 and 11, which may be characterized in that the functional molecular element includes a complex of an organic molecule having anisotropy of dielectric constant or dipole moment and including side chains each of which structure is changed under application of electric field, and metallic ion.

### ***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tu-Tu V. Ho whose telephone number is (571) 272-1778. The examiner can normally be reached on 6:30 am - 3:00 pm, Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven H. Loke can be reached on (571) 272-1657. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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